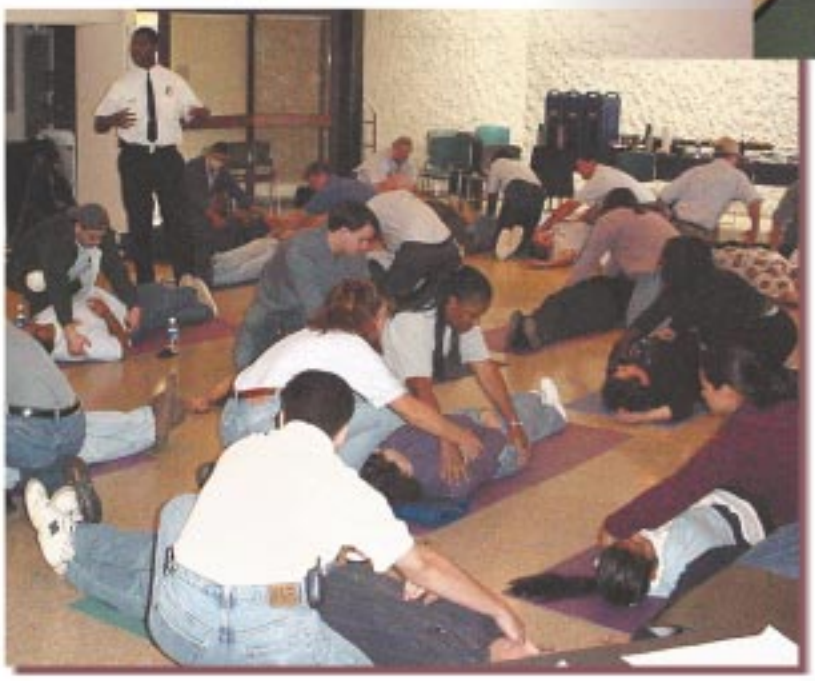
Community Emergency Response Teams, part 1

The Community Emergency Response Team:

The real first responders



Members of City of Los Angeles CERT teams practice packaging and moving the injured.

Photos courtesy CERT Training program, Los Angeles City Fire Department

Since civilians are the first ones hit by a disaster, it only makes sense to train them to help themselves and each other.

By Frank W. Borden and Robert G. Lee

When disaster strikes a community, critical resources such as emergency services, communications, transportation and utilities are often overwhelmed. Many times neighborhoods and businesses are cut off from outside support, and access by emergency response agencies into critically affected areas may be difficult or temporarily impossible.

Individuals, neighborhoods, schools and businesses might need to rely on their own resources for food, water, first aid and shelter in the 72 hours immediately following a disaster, so self-help and mutual aid become essential. The ability to fend for oneself during this crucial period will be critical to survival and recovery.

In every major disaster, volunteers emerge to do the initial search, rescue and first aid. Such volunteerism is in fact inevitable. Combine this with the probability that critical resources will be overwhelmed, and you have two good reasons to prepare at the community level.

In the mid '80s, a program began to emerge in Los Angeles that would increase community self-sufficiency during times of disaster. The Community Emergency Response Team concept was adopted and since then has gone into use worldwide. Community preparedness makes sense for a number of reasons:

- Hazard reduction and preparedness measures reduce injuries, loss of lives and property damage.

■ Individuals and organizations perform more effectively during and after a disaster if there has been prior planning for disaster response. Experience has indicated that self-help preparedness will enhance a person's ability to manage and perhaps even reduce some of his or her own emergency needs.

■ Preparedness efforts are more successful if they're incorporated into the social and political fabric of the community: neighborhoods, schools, work places, churches, etc.

■ Effective response requires comprehensive planning and coordination of all who need to be involved: government, volunteer groups, private businesses, schools, etc. With the necessary training and information, individuals, neighborhoods, schools and businesses can serve as crucial resources, capable of performing many of the emergency functions needed in the immediate post-disaster period.

The beginnings of CERT

In September 1985, a group of Los Angeles City officials, including Asst. Fire Chief Frank Borden, went to Japan to study its extensive earthquake-preparedness plans. The group encountered a homogenous society that had taken extensive steps to train entire neighborhoods in one aspect of alleviating the potential devastation that would follow a major earthquake. These single-function neighborhood teams were trained in fire suppression, light search and rescue, first aid, or evacuation.

The next month, a Los Angeles City investigation team lead by Borden was sent to Mexico City following a magnitude 8.1 earthquake there that killed more than 10,000 people and injured 30,000. Before the disaster, Mexico City had no training program for citizens. However, large groups of volunteers spontaneously organized and performed light search and rescue operations. Although volunteers are credited with more than 800 successful rescues, unfortunately, more than 100 of these untrained individuals died during the 15-day rescue operation.

The lessons learned in Mexico City strongly indicate that a plan to train volunteers to help themselves and others, and become an adjunct to government response, is essential to overall preparedness, survival and recovery.

From the experiences in 1985, Borden developed a pilot program to train a group of leaders in a Neighborhood Watch organization to be first responders in their own community. A concept developed that involved multi-functional volunteer response teams with the ability to perform basic fire suppression, light search and rescue, and first aid. This first CERT team of 30 people completed training in early 1986 and proved through various drills, demonstrations and exercises that the concept is viable. The program was expanded from neighborhoods to include business and government employees.

The CERT members who responded to the 1994 Northridge earthquake clearly made a difference.

On Oct. 1, 1987, the Whittier Narrows earthquake vividly underscored the threat of an area-wide major disaster and demonstrated the need to expedite the training of civilians to prepare for earthquakes and other emergencies.

Following the Whittier Narrows quake, the City of Los Angeles took an aggressive role in protecting its citizens by creating the Disaster Preparedness Division within the fire department. Their objectives included:

- Educate and train the public and government sectors in disaster preparedness.
- Research, evaluate and disseminate disaster information.
- Develop, train and maintain a network of CERTs.

The CERT curriculum

Volunteers are trained in basic self-help emergency functions such as team organization, fire suppression, utility control, search and rescue, and disaster medical operations. To maximize training efforts and ensure quality instruction, classes should be between 25 and 60 people. Firefighters and paramedics teach the course in seven 2½-hour classes that emphasize hands-on training.

Training is given to meet the specific needs of three groups.

■ **Community groups:** Homeowners associations, Neighborhood Watch groups or religious organizations are brought together to form geographically distributed teams.

■ **Business and industry:** Business groups are selected depending on location and where they can accomplish the most good for the public during a large disaster. This includes high-rise office buildings, large hotels or large industrial complexes.

■ **City government:** To improve disaster operations and the city's recovery abilities, train city employees to enable city government to continue providing needed services to its citizens.

A seven-week, 17½-hour training program was developed to prepare individuals for the demands forced on them by a major disaster. The training is not designed to enable civilians to respond to a disaster with the ability of professional emergency personnel. Instead, it teaches greater self-sufficiency and optimizes chances of survival.

Class 1 begins with an **overview of the earthquake threat** in Southern California. Personal and family preparedness are emphasized, because members must feel comfortable about the safety of their families and loved ones if they're forced to function away from home during an emergency. This is followed by "how to" information on non-structural hazard mitigation.

Class 2 outlines **basic fire suppression techniques**, including size-up, fire chemistry, fire extinguisher types and usage, and utility control. Participants extinguish a flammable-liquid fire and begin developing self-confidence and teamwork.

Class 3 begins **disaster medical operations** with recognition and treatment of life-threatening emergencies. Volunteers also learn the principles of triage, transportation and treatment area management.

Class 4 is the **second session of disaster medical operations**. Head-to-toe patient evaluation is taught, along with recognition and treatment of non–life-threatening injuries.

Class 5 discusses **light search and rescue operations**, including search techniques, evacuation and rescue methods, principles of mechanical advantage, and basic cribbing. Heavy emphasis is placed on recognizing rescue safety by discussing the dangers of

various building constructions.

Class 6 prepares members for the emotional environment by discussing **the psychology of a disaster**. The Incident Command System is introduced in a simplified format, again stressing the need for teamwork, organization and logistical planning.

Class 7 is a course **review and simulated disaster exercise**. Participants are required to apply the individual principles they've learned to the demands of a simulated disaster. This class dramatizes the multi-functional training approach and promotes team reliance.

Efforts are made to custom-fit each program to the needs of the group receiving the training. For example, when teaching the program to a community group in the heavily brush-laden Santa Monica Mountains, special emphasis is placed on home preparation for brush fires and actions to take during a large-scale brush fire. When working with business teams based in a high-rise building, alarm and standpipe systems, stairwell access, and evacuation techniques are discussed.

Team operations

On completion of the course, team members are given certificates, along with green hard hats and silk-screened vests for identification. In addition, they're encouraged to buy personal safety equipment, such as goggles, gloves and basic first aid supplies. Businesses, on the other hand, are encouraged to provide needed safety equipment for their trained employees and to establish an emergency supply cache.

As each team is formed, they select a team leader, one alternate and an emergency meeting location (staging area). Teams are instructed to go into action during a relatively moderate earthquake of magnitude 5.0 or greater on the Richter scale. The idea is to have the team practice mobilization and damage-assessment skills, regardless of actual need. They may also be notified to stand by or pre-deploy in the types of emergencies for which there might be a warning, like a hurricane.

The deployment of CERTs in an actual disaster is intended to occur progressively and as needs dictate. Members are taught to first assess themselves and their immediate environment and respond as necessary. If there are no problems, they then expand to adjacent areas and continue to assess damage and provide assistance.

CERT members would report to their staging locations and formulate action plans based on overall area needs. If members find themselves in a heavily affected location and problems are greater than they can handle, runners are sent to staging locations to obtain help from available resources. CB and ham radio links can be used to increase communication capabilities and coordination.

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The fire department would interact with a CERT at the staging location, where damage assessments and volunteer resource availability can be more effectively communicated.

The follow-through

Obviously, training can't be a one-time job; awareness, commitment and skills have to be repeatedly practiced. With this in mind, the city formed the Community Liaison Program. The liaisons are in a position to stimulate interest and maintain involvement in the team by scheduling regular team meetings and by planning and participating in practice disaster scenarios.

To maintain skill levels and improve performance, supplemental training for each team is conducted quarterly with 2½-hour continuing-education classes. Teams from various areas are combined during this training, so fire department resources can be used more efficiently and so the networking of teams can be expanded.

The CERT program is an effective first-response capability. Acting as individuals first, then later as a team, trained volunteers can fan out within their areas, extinguishing small fires, turning off natural gas inlets to damaged homes, performing light search and rescue, and then rendering basic first aid. Trained volunteers also offer a potentially important work force to service organizations in non-hazardous functions, such as shelter support, crowd control, evacuation, etc.

Clearly, the key to survival is self-sufficiency, and the key to mitigating the effects of a disaster is preparation and planning. The CERT program is a significant step toward reducing the impact of a disaster by ensuring that city employees, civilians in business and community groups will be not only spontaneous first responders, but also trained and effective ones.

Two case studies

In what was the system's first big test, the CERT members who responded to the 1994 Northridge earthquake clearly made a difference. It's estimated that more than 1,000 CERT members responded immediately to handle the many emergencies in their neighborhoods. Because the earthquake occurred at 4:31 a.m., most of the injured or trapped victims were at home. A survey of 324 CERT members indicated the following activities:

- Seventy-two members (25%) effectively managed and worked with over 1,000 spontaneous volunteers, an average of one team member to 14 volunteers. Team effectiveness was greatly improved by the addition of people with special skills, such as nurses and carpenters.
- CERT members performed 203 searches, made 17 rescues, provided medical care to 57 injured victims and transported 11 to hospitals, suppressed five fires, and controlled 156 utility problems.
- Of the 203 members who performed searches, 20 found a total of 59 trapped victims. Seventeen CERT members rescued 24 victims from entrapment. Types of entrapment included structural collapse or under furniture or debris.
- Fifty-two percent of the CERT members worked with a partner, 11% worked with their team, and 37% worked alone due to area isolation and damage. By working together, they were more confident and more effective and worked in a safer environment.

From this relatively small sampling of CERT members' actions, it's apparent that this civilian response force performed many response activities that reduced life loss, injury and property loss, before city emergency responders could arrive.

Studies of the response to trapped victims in the 1995 Kobe earthquake indicate that 90% of the deaths occurred from structural collapse and fire. Even without a group of trained volunteers, 67% of the rescues were made by the people in the neighborhoods, with the remainder made by the emergency responders.

The survival rate of trapped victims showed that most were rescued in the first three hours, with 80% rescued on the first day, 28% on the second, 22% on the third and 5% the fourth day. Where a neighborhood had a strong leader, people were better organized with household tools to perform rescues, resulting in more lives saved.

What can be learned from this experience and many other earthquakes in urban areas around the world? Many of those emergency responders in Kobe said that even more victims would have been located in the rubble and safely extricated, if only the people in the neighborhoods had been trained and prepared to perform basic search and rescue operations.

One of the many conclusions drawn from the terrorist attacks on 9-11-01 was that the community must be prepared to be self-sufficient and to be the first responders. Many thousands of workers in the World Trade Center who were trained to evacuate were saved because they acted on their own, as they'd been trained.

The motto "Let's roll" from the heroes aboard Flight 93 signifies ordinary people's willingness to respond in extraordinary circumstances to save others, and points to the need for self-sufficiency and readiness to respond. The CERT program was endorsed by President Bush as a part of the new Citizen's Corps as a way to increase our homeland defense system on a community-by-community basis.

Experience makes it obvious that a community trained to respond to protect their families, neighbors and coworkers will reduce life loss and injury at any kind of emergency or disaster, human-caused or natural. Knowing what to do and how to do it before the event is critical to survival. The most abundant response resource in a disaster is the people in the neighborhoods.

While the fundamental responsibility for preparedness lies with every individual, it's important for the community and the government to work together to increase response capability with a program similar to the CERT program.

The City of Los Angeles has trained over 40,000 citizens in the program. The CERT program today has spread throughout the United States and into other countries that have realized the benefits of being prepared to respond at all levels. HPP

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